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ABSTRACT

The paper identifies characteristics of gifted and talented children. A matrix is presented listing gifted/talented student characteristics crossed with possible information sources for determining giftedness (i.e., test data, performance data, and developmental data). Appendix pages then provide details of various tests that are available to aid the identification process. In the category of cognitive ability, tests listed include individual and group intelligence tests, aptitude tests, achievement tests, and creative and critical thinking skills tests. Affective data may be assessed through self-concept tests and personality tests. Psychomotor tests are also included. The appropriate age or grade level for each test is cited, and subtests of each test are noted.(JDD)

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EVALUATION REPORT

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GIFTED AND/OR TALENTED TARGET POPULATION AND IDENTIFICATION PROCESS: MATRIX OF STUDENT CHARACTERISTICS AND DATA SOURCES 1988-89

DEPARTMENT OF EVALUATION SERVICES

- PROVIDING ASSESSMENT, PROGRAM EVALUATION AND RESEARCH SERVICES -

Saginaw Public Schools

Saginaw, Michigan

EC 230838

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GIFTED AND/OR TALENTED TARGET POPULATION AND IDENTIFICATION PROCESS: MATRIX OF STUDENT CHARACTERISTICS AND DATA SOURCES 1988-89

An Approved Report of the
DIVISION OF ADMINISTRATION AND PERSONNEL
Department of Evaluation, Testing, and Research

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December, 1988

GIFTED AND/OR TALENTED TARGET POPULATION AND IDENTIFICATION

This title raises a number of important questions:

- Who are the students who have needs for special program services because of their outstanding or superior talents and/or abilities?
- How can we identify them and their special needs?
- How can we use the identification process to begin planning and providing an individualized education for them?

These questions are often ignored in the identification process. Instead, there is often an unstated assumption that the task in serving gifted and talented youth is to find them, once and forever, and programs will be self-defining.

However, the multi-talent conception of giftedness that modern educators embrace calls for differentiated programs for gifted and talents students. Giftedness as now conceived is not a single trait. Rather, there are a number of ways of being gifted or talented, and within gifted individuals there may be a number of talents, skills, abilities, personality factors, interests, conceptions of self, attitudes, motivations, and energy factors that contribute to superior potential or giftedness.

Thus Gifted children are:

> Those individuals identified by professionally qualified persons who by virtue of outstanding abilities are capable of high performance. These are children who require differentiated educational programs and services beyond those normally provided by the regular school program in order to realize their contribution to self and society.
>
> Children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas, singly or in combination.
>
> 1. General intellectual ability
> 2. Specific academic aptitude
> 3. Creative or critical thinking
> 4. Leadership ability
> 5. Visual and performing arts
> 6. Psychomotor ability

Many individuals, parents and school personnel among others, often seem to assume that giftedness is "inborn" and fixed forever and that what is needed is to find the truly or really gifted child. Actually, giftedness is a set of abilities, traits, and characteristics that emerge through nurturance. Some children get off to a head start and remain ahead. A few have spurts later and seem suddenly to become gifted. But above all the abilities and skills of the gifted have, for the most part, been learned.

Procedures for identification should, whenever possible, involve multiple inputs, but those inputs should bear a valid relationship to the types of giftedness being identified. Thus a language arts achievement test, a verbal IQ, and a reading score may be valid identification scores for a program that seeks to identify and nurture verbal talents while these same scores would not be appropriate for identifying mathematical or artistic talent. Multiple inputs also means that in addition to test scores, ratings of observed behavior or products should be considered, and that such data should be secured not only from teachers but also from parents and potentially gifted youth themselves. Synthesizing data from the identification process calls for judgment. Numbers alone cannot determine a student's giftedness or special needs. Many schools have organized identification-differentiation committees to carry out the final process of selecting those youth who have superior talent and who need special program services.

The purpose of this paper is to identify characteristics of gifted and talented children. With that in mind a number of standardized and non-standardized methods of identifying and assessing these characteristics are offered.

Table 1 below is a matrix of gifted and talented student characteristics crossed with possible information sources for determining giftedness (e.g., test, performance, and developmental data). A "X" indicates that a possible measurement of a gifted and talented student characteristic can be obtained from the information sources detailed across the top of the table.

TABLE 1. A REVIEW OF GIFTED AND TALENTED STUDENT CHARACTERISTICS BY VARIOUS POSSIBLE DATA SOURCES.

Gifted and Talented Student Characteristics	TEST DATA										PERFORMANCE DATA						DEVELOPMENTAL DATA
	COGNITIVE					AFFECTIVE			OTHER				NOMINATIONS, CHECKLISTS, SCALES				
				Thinking Skills													
	Intelligence	Aptitude	Achievement	Creative	Critical	Self-Concept	Personality	Psychomotor	Developmental	G & T Screening Instruments	Grades	Demonstrations of Skills	Teacher and/or Other School Personnel	Peer	Parent	Self	Case Studies, Anecdotes, Biographical Data, and Interviews
Academic/ Intellectual	X	X	X		X		X			X	X	X	X	X	X	X	X
Artistic/ Expressive		X		X			X		X	X		X	X	X	X	X	X
Leadership/ Psychosocial				X	X	X	X			X		X	X	X	X	X	X
Divergent Production/ Process		X		X	X					X		X	X	X	X	X	X
Kinesthetic								X	X			X	X	X	X	X	X
Thinking Skills																	
Creative	X	X		X			X			X		X	X	X	X	X	X
Critical	X	X			X		X			X		X	X	X	X	X	X

As can be seen by a study of Table 1, there are a variety of standardized test results, performance indicators, and developmental information sources that may be accessed to secure data for the identification process.

The appendix pages that follow give some detail of the various tests that are available by test data type and the various subtest/total test scores that are available to aid the identification process. An "X" on these pages indicates that the particular test across from this mark has a subtest/total test score with the name of the particular column.

A table of contents to the appendix is given below:

Cognitive Data

Intelligence Tests (Individual) 6

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Aptitude Tests 8

Achievement Tests 9

Creative Thinking Skills Tests 10

Critical Thinking Skills Tests 11

Affective Data

Self-Concept Tests 12

Personality Tests 13

Other

Psychomotor Tests 14

Note to the Reader: The appended materials should provide a handy guide and resource for those interested in identifying students, redefining programs, and assessing the outcomes of gifted and talented programs. Thus this booklet serves as a ready reference to guide the process of individual assessment, participant screening and program evaluation functions related to gifted and/or talented individuals.

APPENDICES

INTELLIGENCE (INDIVIDUAL.)

Test (Age/Grade)	Subtests: Verbal	Non-Verbal	Performance	General Reasoning	General Intelligence	Language[1]	Memory	Conceptual[2] Thinking	Quantitative[3] Reasoning	Social Reasoning	Visual Motor
(Raven's) Progressive Matrices											
Level 1 (Ages 5 & over)		X						X	X		
Level 2 (Ages 6 & over)		X						X	X		
Level 3 (Ages 11 & over)		X						X	X		
Peabody Picture Vocabulary Revised (Ages 2.5 - 4)		X				X					
Standard-Binet Intelligence Scale 4th Ed. (Ages 2 - Adult)	X	X			X	X	X	X	X	X	X
Wechsler Intelligence Scale for Children, Revised (Ages 5-16)	X		X		X	X	X	X	X		X
Wechsler Preschool & Primary Scale of Intelligence (Ages 4 - 6.5)	X		X		X	X	X	X	X		X
Lorge-Thorndike Intelligence Test											
Level 1 (Gr K-1)		X									
Level 2 (Gr 2-3)		X									
Level 3 (Gr 4-6)	X	X									
Level 4 (Gr 7-9)	X	X									
Level 5 (Gr 10-12)	X	X									
Goodenough-Harris Drawing (Ages 3-15)		X			X						
Wechsler Adult Intelligence Scale (Ages 16 & up)	X	X	X			X	X	X	X		X
Columbia Mental Maturity Scale (Ages 3-15)		X		X							

[1] The heading of Language includes measurements of a student's intelligence with regards to receptive vocabulary and general language skills.

[2] The heading of Conceptual Thinking includes measurements of a student's intelligence with regards to pattern completion and systematic alterations to a pattern.

[3] The heading of Quantitative Reasoning includes measurements of a student's intelligence with regards to their ability to solve arithmetic problems and resolve figures into parts.

INTELLIGENCE (GROUP)	Subtests									
Test (Age/Grade)	Quantitative[1]	Verbal[2]	Language[3]	Reading	Memory Language	Non-Language	Logical Reasoning	General Mental Ability	Academic[4] Potential	Total
California Short Form Test of Mental Maturity (Gr K-Adult)	X	X			X	X	X			X
Cognitive Abilities Test										
(Gr K-1)	Revisions of Lorge-Thorndike Intelligence Test									
(Gr 2-3)										
(Gr 3-12)	X	X				X				
Short Form Test of Academic Aptitude (Gr 1.5-12)			X			X				X
The Hennon-Nelson Test of Mental Ability (Gr K-12)									X	
Analysis of Learning Potential										
Primary Battery (Gr 1-6)	X		X	X						
Advance Battery (Gr 7-12)	X		X	X						
Otis-Lennon Mental Ability Test (Gr K.5-12)								X		
Kulhman-Anderson Test 7th Edition (Gr K-12)								X		

[1]The heading of Quantitative includes measurements of a student's intelligence with regards to numerical reasoning and computation.

[2]The heading of Verbal includes measurements of a student's intelligence with regards to verbal concepts.

[3]The heading of Language includes measurements of a student's intelligence with regards to vocabulary and language skills.

[4]The heading of Academic Potential includes measurements of a student's academic aptitude as well as their academic potential.

APTITUDE

Test (Age/Grade)	Reading	Reading Comprehension	Language[1]	Quantitative[2]	Social Science	Science	General Information	Verbal Reasoning	Word Analysis	Analytical[3]	Art Judgment	Musical Ability
	Subtests											
College Board Scholastic Aptitude Test and Test of Standard Written English (Junior High Gifted)		X	X	X								
Differential Aptitude Test (Gr 8-12)			X					X		X		
SCAT (Gr 4-14)[4]			X	X								
Meier Art Test (Gr 7-Adult)											X	
Seashore Measure of Musical Talent (Gr 4 & up)												X
Musical Aptitude Profile (Gr 4 & up)										X		X

[1]The heading of Language includes measurements of a student's aptitude with regards to spelling, vocabulary, verbal word knowledge, paragraph meaning and English Expressions.

[2]The heading of Quantitative includes measurements of a student's aptitude with regards to arithmetic, problem solving and math computation.

[3]The heading Analytical includes measurements of a student's aptitude with regards to abstract reasoning, mechanical reasoning, space reasoning, and problem solving.

[4]Presently this test is administered to all applicants for the Center for the Arts and Sciences.

TEST DATA/COGNITIVE

ACHIEVEMENT

Test (Age/Grade)	Subtests: Reading	Reading Comprehension	Language	Quantitative	Social Science	Science	General Information	Word Analysis	Analytical
SRA Assessment Survey									
Primary Edition (Gr 4-9)	X		X	X					
Multi-Level Edition (Gr 4-9)	X		X	X	X	X			
Iowa Test of Basic Skills									
Grades 1.7 - 2.5		X	X	X				X	X
Grades 2.6 - 3.5		X	X	X				X	X
Grades 3 - 9		X	X	X					X
Stanford Achievement Test (Gr 1-12)									
Intermediate I Battery			X	X	X	X			X
Intermediate II Battery			X	X	X	X			
Advanced Battery			X	X	X	X			
California Achievement Test (CAT K-12) [1]	X	X	X	X	X	X			X
Sequential Test of Educational Progress (Gr 4-14)									
Grades 4-6	X		X	X	X				
Grades 7-9	X		X	X	X				
Grades 10-12	X		X	X	X				
Grades 13-14									
Metropolitan Achievement Test (MAT)									
Intermediate Battery (Gr 5-6)	X		X	X	X	X			X
Advanced Battery (Gr 7-9)	X		X	X	X	X			X
College Board Achievement Test	Test in a wide range of subject areas are available								
Peabody Individual Achievement Test (K-Adult)	X	X	X	X			X		

[1] This test is administered district-wide to all students in grades 1-6, 8, 9, and 11.

TEST DATA/COGNITIVE

CREATIVE THINKING SKILLS	Subtests							
Test (Age/Grade)	Fluency	Flexibility	Originality	Fine Arts	Sound and Images	Onomonopea and Images	Elaboration	General Creativity
Khatena - Torrance Creative Perception (Ages 12 & over)								X
Torrance Test of Creative Thinking - Verbal (Gr K-3)	X	X	X					
- Figural (Gr 1-12)	X	X	X				X	
Thinking Creatively With Sounds and Words (Gr 3-12)					X	X		
Christensen - Guilford Fluency Test (Gr 7-16)	Word, Ideational, Associational and Expressional							
Creative Product Scale (Gr 7-Adult)				Art, Literature, Poetry, Dance, and Musical Products				

CRITICAL THINKING SKILLS Test (Age/Grade)	Subtests: Analysis	Reasoning	Deductive Logic	Synthesis	Inference	Deduction	Recognition of Assumptions	Evaluation	General Thinking Skill	Assess Moral Judgment	Generalization
The Moral Judgment Scale										X	
Butch & Slim Test of Propositional Logic (Age 8-Adolescent)	X										
Classification Task (Age 10-18)	X										
Cornell Class Reasoning Test Form X (Gr 4-12)		X	X								
Cornell Critical Thinking Test Level X (Age 14 & above)	X		X		X			X			X
Level Z (High ability sec. studs.)	X		X		X			X			X
Cornell Conditional Reasoning Test Form X (Gr 4-12)		X	X								
Inquiry Skill (Age 9-15)				X							
Literature Formal Reasoning Test (Age 14 & up)	X										
Watson-Glaser Critical Thinking Appraisal (Gr 12 & up)					X	X	X	X			
Means-End Problem Solving (MEPS) (Ages 6 & up)		X			X	X					
Object Sorting Task (OST) (Ages 5 & up)					Fluency						
Ordering Task (Ages 10-14)	X										
Paulus Conditional Reasoning Test Form Z (Ages 12-16)								Conditional Reasoning			
Pictorial Class Inclusion Problems (Ages 5-7)	Class Inclusion										
Purdue Elementary Problem Solving Inventory (Ages 5-11)	X			X							
Asher-Gallagher System (Any Classroom)									X		
Cognitive Levels Analysis Interaction Model (Any Classroom)									X		
Florida Taxonomy of Cognitive Behaviors (Any Classroom)									X		

SELF-CONCEPT

Test (Age/Grade)	Self Concept[1]	Support Climate[2]	Motivation[3]	Sex Role[4]	Cooperation and Conformity	Autonomy	Emotions	Immediate to Intrinsic Orientation[5]	Sexual Attitudes
	Subtests								
How I See Myself Scale									
(Gr 3-6)	X			X		X			
(Gr 7-9)	X			X		X			
(Gr 10-12)	X			X		X	X		
Tennessee Self-Concept Scale									
(Ages 12 & up)	X						X		
The Self-Concept and Motivation Inventory (What face would									
you wear?) (PreK-K)	X		X						
(Gr 1-3)	X		X						
(Gr 4-6)	X	X	X						
(Gr 7-12)	X	X	X		X			X	
BBH Sex Role Inventory (High School)				X					
The Piers-Harris Children's Self-Concept Scale (Gr 3-12)	X	X							
Self-Perception Inventory									
(Gr 1-12)	X								
(Gr 9-12 & Adult)	X								
Offer Self-Image Questionnaire for Adolescents (Ages 14-18)	X	X					X		X
Harter Scale (Preceival Competence Scale for Children) (Gr 3-6)	X								
The Me Scale (Gr 3-6)	X								
Self-Conflict Academic Scale									
(Gr 7-12)	X								

[1]The heading of Self-Concept includes measurements of a student's self concept with regards to academics, interpersonal, and language.

[2]The heading of Support Climate includes measurement of a student's support climate with regards to teachers, parents, siblings, and peers.

[3]The heading of Motivation includes measurements of a student's motivation with regards to goals, achievements, needs, responsibility, acceptance and praise.

[4]The heading of Sex Role includes measurements of a student's self concept with regards to masculinity or femininity, sexual differences, and attitudes toward peers.

[5]The heading of Immediate Intrinsic Orientation includes measurements of a student's self concept with regards to evaluated competition, tasks and projects, discovery and creativity skills.

PERSONALITY

Test (Grade/Age)	Subtests: General Personality	Personality Strengths	Relations	Self	Social	Emotions	Sense of Humor	Ego Development	Achievement for Success Used	Values[1]
California Test of Personality (Gr K-14)	X		X		X	X				
Personality Rating Scale (Gr 4-12)	X			X			X			
Early School Personality Questionnaire (Ages 6-8)	X	X								
Junior-Senior High Personality Questionnaire (Ages 12-18)		X								
Personality Research Form (Gr 7-16)	X				X					
Washington University Sentence Completion (Ages 12 & over)								X		
Meyers-Briggs Type Indicator (Gr 9-16)		X								
Children's Personality Questionnaire (Ages 8-12)		X				X				
Cooperative Preschool Inventory Revised Edition (Ages 3-6)										X
Barron-Welsh Art Scale of the Welsh Figure Preference Test (Ages 6 & over)	X									
Study of Values: A Scale for Measuring the Dominant Interests in Personality (Gr 10-16)										X
Minnesota Multiphasee Personality Inventory (MMPPI) (Ages 16 & over)					X	X				
California Psychological Inventory (Ages 12-Adult)	X	X		X	X					

[1]The heading of Values includes measurements of a student's personality with regards to theoretical, economic, aesthetic, social, political and religious values.

PSYCHOMOTOR

Test (Grade/Age)	Subtests: Academics	Intelligence	Creativity	Leadership	Fine Art[1]	Psychomotor[2]	Language	Perceptual Performance	Verbal	Quantitative	Memory	General Cognitive
Gifted and Talented Screening (Gr 1-9)	X	X	X	X	X	X						
Dial R (Ages 2-6)						X	X					
Checklist for Kindergarten (Gr K)			X			X	X			X		
McCarthy Scales of Children's Abilities (Ages 2-9)						X		X	X	X	X	X

[1]The heading of Fine Art includes measurements of a student's psychomotor abilities with regards to visual performance.

[2]The heading of Psychomotor includes measurements of a student's athletic, mechanical and early motor abilities.